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October 14, 2011

Mr. Jacob Hassan
Environmental Scientist
USEPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

Subject: Quarterly Monitoring Report July through September 2011
Northeast Investigation Area, Hanover Park, Illinois
AECOM Project No. 60151902.2200

Dear Mr. Hassan:

Enclosed please find the July through September 2011 Quarterly Monitoring Report for the Northeast Investigation Area in Hanover Park, Illinois. This report was prepared by AECOM Technical Services, Inc. (AECOM) on behalf of BFI Waste Systems of North America, LLC (BFI) and the Forest Preserve District of DuPage County (FPDDC).

If you have any questions or comments, please contact Matt Weiss at (630) 839-5349.

Yours sincerely,

Hilary Taghap
Staff Geologist

Matthew Weiss, P.G.
Staff Hydrogeologist

cc: Mr. James Hitzeroth, BFI
Mr. Joseph Benedict, FPDDC
Mr. Tom Rivera, IEPA
Mr. Paul Ruesch, USEPA
Ms. Joy Hinz, DuPage County
Mr. John L Petruccione, PG, AECOM
Mr. Michael G. Ruetten, AECOM

AECOM

Prepared for:
BFI Waste Systems of North America, LLC
Hanover Park, IL

Prepared by:
AECOM
Warrenville, IL
60151902
October 2011

Quarterly Report
July through September 2011

Northeast Investigation Area
DuPage County, Hanover Park, IL

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Quarterly Report
July through September 2011

Northeast Investigation Area
DuPage County, Hanover Park, IL

Prepared By Hilary Taghap

Reviewed By Matthew Weiss, P.G.

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1.0 Introduction

1.1 Purpose

This quarterly monitoring report documents field activities and monitoring data obtained from July through September 2011 ("3rd quarter") in the Northeast Investigation Area, Hanover Park, IL ("NE Area"). This report presents gas probe monitoring data collected during the 3rd quarter 2011 monitoring period, a map of the existing monitoring probe network and graphical analyses of gas concentrations and static pressures in monitoring probes with significant methane detections.

1.2 Site Location

The NE Area encompasses the area directly east of the West Branch of the DuPage River ("WBDR") to the western edge of Greenbrook Elementary School and from the southern portion of Heritage Park to the northeast corner of the permitted boundary of the Mallard Lake Landfill property (Figure 1). The NE Area is located primarily on Mallard Lake Forest Preserve property owned by the Forest Preserve District of DuPage County ("FPDDC") and partially on property owned by Keenyville Elementary School District 20.

1.3 Corrective Action Status

Remedial corrective actions in the NE Area are being conducted simultaneously with off-site remedial actions adjacent to the Mallard Lake Landfill (MLL). The following summarizes the major correspondence since the beginning of October:

October 29, 2010 – AECOM submits the Soil Equilibrium Test Evaluation Report for the Greenbrook School Investigation Area.

November 17, 2010 – AECOM abandons the 19 gas monitoring probes in the School Area as approved by USEPA.

January 18, 2011 – USEPA provides comments on the Soil Equilibrium Test Evaluation Report.

February 8, 2011 – AECOM submits proposed sampling and monitoring program pursuant to IEPA request during the January 27, 2011, site status meeting.

March 1, 2011 – USEPA grants conditional approval of the sampling and monitoring schedule proposed by AECOM the February 8, 2011 letter.

March 3, 2011 – AECOM submits responses to USEPA comments on the Soil Equilibrium Test Evaluation Report including a revised Tiered Trigger System for future remedial activities.

May 17, 2011 – USEPA approves the Soil Equilibrium Test Evaluation Report submitted on October 29, 2010 and associated responses to comments dated January 18, 2011.

2.0 Monitoring

A total of 29 monitoring locations comprise the current network in the NE Area and are listed in Table 1 and shown on Figure 1. This monitoring probe network is monitored on a monthly and quarterly basis as listed in Table 1 for methane, carbon dioxide, oxygen, balance gas, and static pressure. The monitoring frequency listed in Table 1 is consistent with the monitoring program proposed in AECOM correspondence dated February 8, 2011 and approved by USEPA in correspondence dated March 1, 2011. The March 1, 2011 approval also requested that probe ML-08I be monitored on a "more frequent basis" due to elevated soil gas pressures from late 2010 through early 2011. AECOM has extended the "more frequent than quarterly" monitoring to probes ML-29 and ML-29S due to their proximity to Greenbrook Elementary School and detected combustible gas at probe ML-29.

Based on stabilized conditions observed during the 2nd quarter 2011 period, monitoring frequency was decreased during the 3rd quarter 2011 monitoring period in five (5) probes from monthly to quarterly. During the 3rd quarter 2011 reporting period, 26 monitoring probes were tested on a quarterly basis. Monitoring probes ML-08I, ML-29 and ML-29S were all monitored monthly.

Soil gas monitoring is performed by attaching a Landtec GEM2000 ("GEM") portable landfill gas meter to the probe and initially measuring static pressure in the probe. The GEM is then run for 3 minutes or shorter if the methane concentration stabilizes. Following the GEM monitoring, the probe or well is opened for a water level measurement, as needed.

3.0 Corrective Action Measures Update

On May 17, 2011 USEPA approved the use of a Tiered Response System ("Trigger System") initially outlined in the Soil Equilibrium Report (AECOM, 2010) to evaluate gas probe monitoring data and to provide a rationale whether or not additional corrective action is needed (Figure 2). In the May 17, 2011 correspondence USEPA also approved the use of alternate remedial activities including the use of a mobile mini-flare and potential installation of a passive gas exchange system, should monitoring data indicate corrective action is necessary. Monitoring data collected since the Trigger System was approved in May 2011 have not indicated static headspace pressures above Level 1 Trigger criteria. Therefore no additional corrective action has been required in the NE Area during the 3rd quarter 2011 reporting period.

4.0 Quarterly Data Evaluation

Gas monitoring probe data from the NE Area generally indicate methane concentrations and static pressures that are consistent with previous reporting periods. Monitoring data at 20 of the 29 monitoring locations which comprise the current network have not measured methane above 0.0% by volume during the 3rd quarter 2011 reporting period. One additional location indicated methane concentrations within the detection limit of the GEM (± 0.3% by volume).

All of the remaining monitoring locations (8 of the 29 total) comprising the current monitoring network have indicated methane concentrations above 0.3% by volume during the 3rd quarter 2011 monitoring period. These locations include: LDE-13, ML-06I, ML-08I, ML-13I, ML-13S, ML-20, ML-23 and ML-29. Historical graphical analyses presented in Appendix A indicate that methane concentrations at all but one of these monitoring locations (ML-23) are within historical methane concentrations limits. Graphical analyses at probe ML-23 appear to indicate increasing methane concentrations over the six (6) quarter period shown to approximately 45% by volume in the 3rd quarter 2011. However, historical data at this probe have indicated methane concentrations as high as 90% (February 2009) by volume suggesting that current concentrations are well below those present prior to corrective action. Nevertheless monitoring at probe ML-23 will continue pursuant to the USEPA approved program.

A decreasing trend in methane concentration was discussed in the 2nd quarter 2011 report for monitoring probes MW-204ES and ML-10I. Due to the stabilizing conditions observed at these probes, the monitoring frequency returned to quarterly during the 3rd quarter 2011 monitoring period. Monitoring at probes MW-204ES and ML-10I did not indicate methane concentrations above 0.0% by volume over this reporting period. Therefore, monitoring on a quarterly basis will continue for the 4th quarter 2011 monitoring period.

A similar decreasing trend was discussed in the 2nd quarter 2011 report for static headspace pressure at probe ML-08I. Headspace pressures at probe ML-08I continues to be less than 10 inches of water column during the 3rd quarter 2011 monitoring period. However, due to elevated static headspace pressures at probe ML-08I persisting throughout the 4th quarter 2010 monitoring period monthly monitoring will continue through the 4th quarter 2011. Should monitoring data during the 4th quarter 2011 monitoring period continue to indicate headspace pressures below Trigger Criteria a quarterly monitoring frequency will be proposed for probe ML-08I during the 1st quarter 2012.

5.0 References Cited

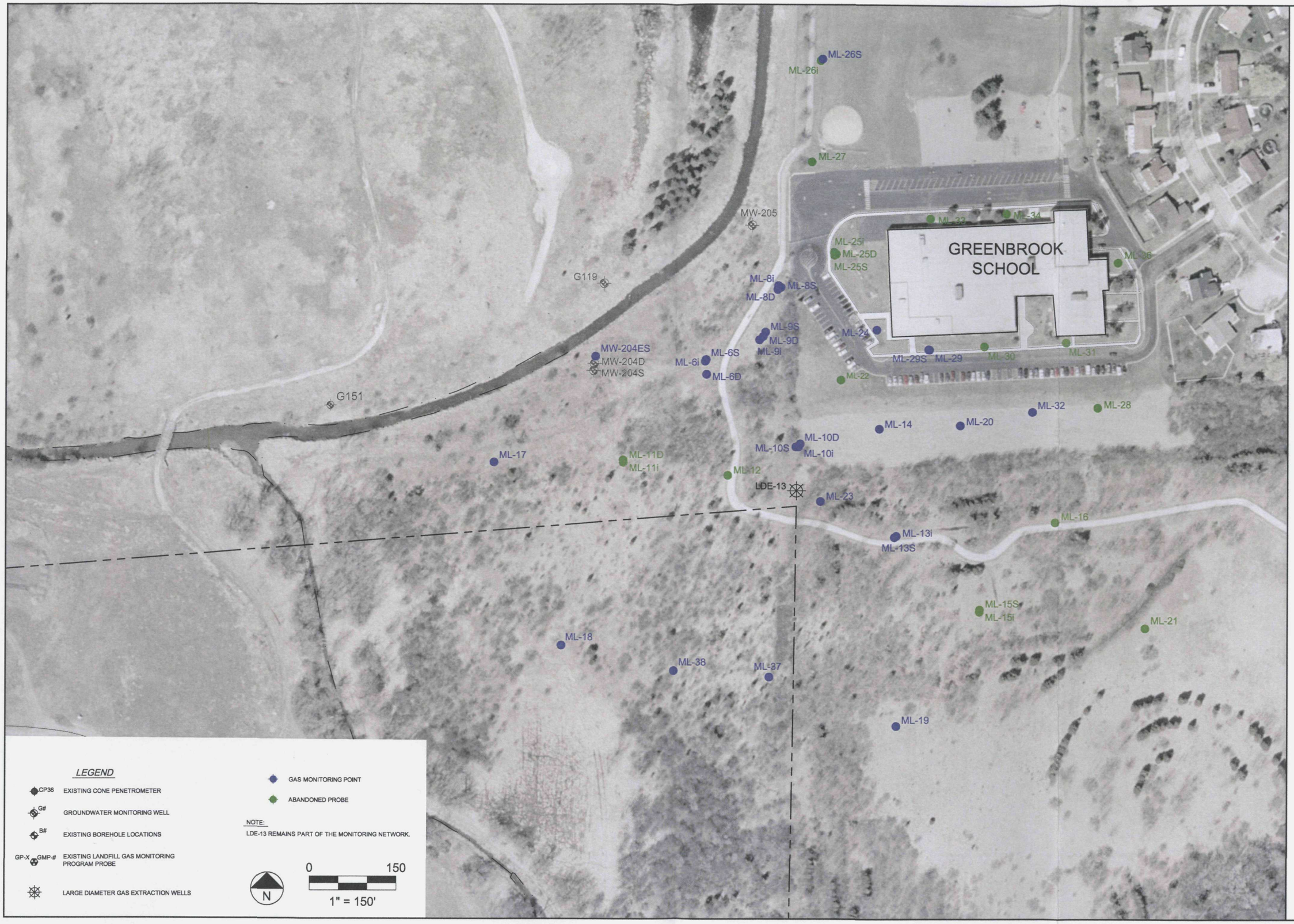
AECOM, 2010. Soil Equilibrium Test Evaluation Report, Greenbrook School Investigation Area, Hanover Park, IL. AECOM Project No. 60151902

Tables

Table 1
Northeast Area Monitoring Network and Frequency
Hanover Park, Illinois

Probe or Well	3rd Quarter 2011 Monitoring Frequency	4th Quarter 2011 Monitoring Frequency	Monitoring Frequency Notes
ML-06D	Quarterly	Quarterly	
ML-06I	Quarterly	Quarterly	
ML-06S	Quarterly	Quarterly	
ML-08D	Quarterly	Quarterly	
ML-08I	Monthly	Monthly	Monitoring data stabilized during 2nd and 3rd quarter 2011
ML-08S	Quarterly	Quarterly	
ML-09D	Quarterly	Quarterly	
ML-09I	Quarterly	Quarterly	
ML-09S	Quarterly	Quarterly	
ML-10D	Quarterly	Quarterly	
ML-10I	Quarterly	Quarterly	
ML-10S	Quarterly	Quarterly	
ML-13I	Quarterly	Quarterly	
ML-13S	Quarterly	Quarterly	
ML-14	Quarterly	Quarterly	
ML-17	Quarterly	Quarterly	
ML-18	Quarterly	Quarterly	
ML-19	Quarterly	Quarterly	
ML-20	Quarterly	Quarterly	
ML-23	Quarterly	Quarterly	
ML-24	Quarterly	Quarterly	
ML-26S	Quarterly	Quarterly	
ML-29	Monthly	Monthly	Monthly monitoring due to proximity to school building
ML-29S	Monthly	Monthly	Monthly monitoring due to proximity to school building
ML-32	Quarterly	Quarterly	
ML-37	Quarterly	Quarterly	
ML-38	Quarterly	Quarterly	
MW-204ES	Quarterly	Quarterly	Monitoring data stabilized during 2nd and 3rd quarter 2011
LDE-13	Quarterly	Quarterly	

Figures



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Gas Probe Monitoring Network
Northeast Area
3rd Quarter 2011
DuPAGE COUNTY
HANOVER PARK, ILLINOIS

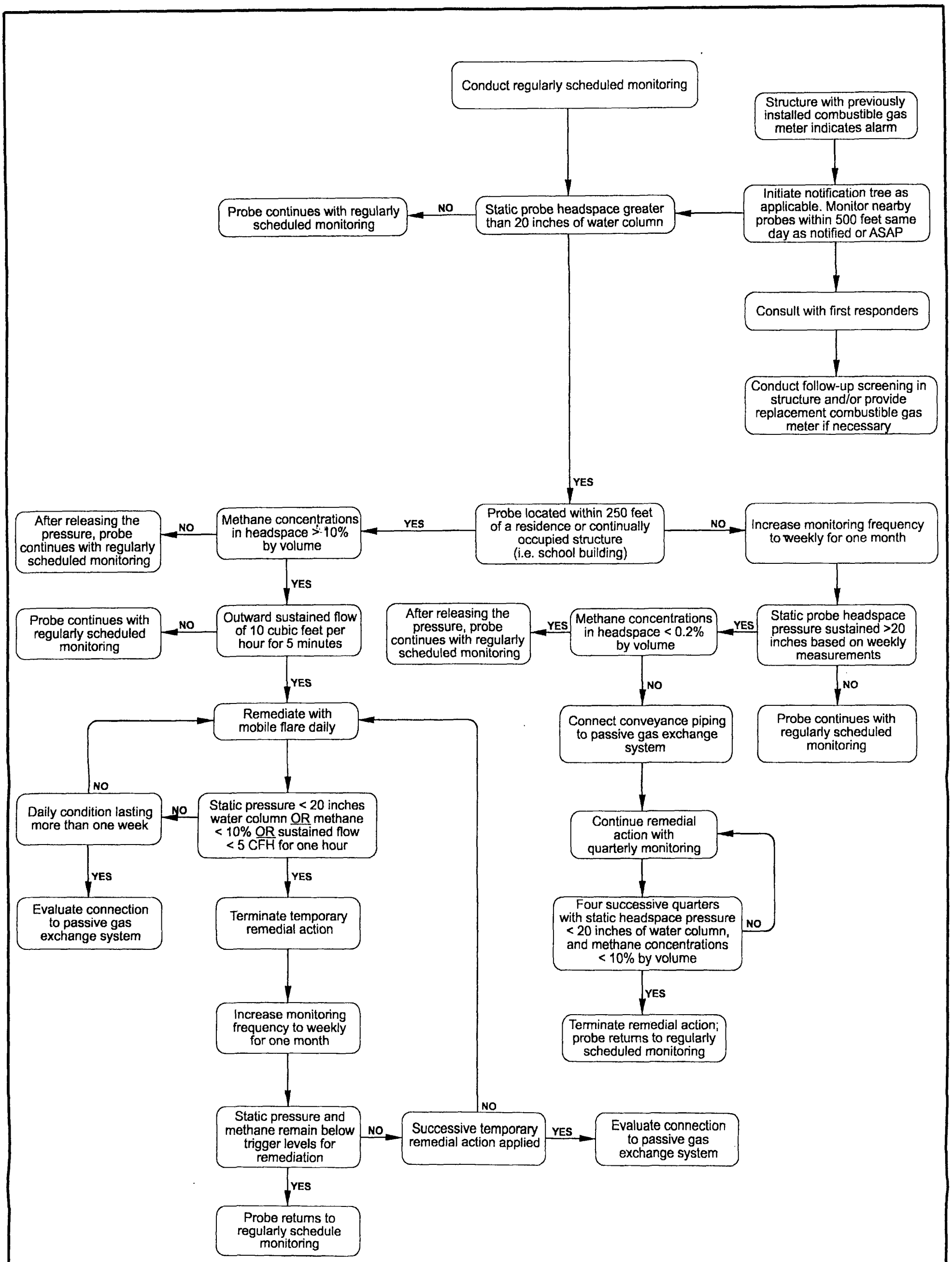
Issued

Rev	Date	Description

Designed:		
Drawn:	KJC	11/22/2010
Checked:	JDM	11/22/2010
Approved:	MGR	11/22/2010

PROJECT NUMBER
60151902

SHEET REFERENCE NUMBER
1



Note: If probe requiring temporary remediation is located less than 200 feet from the previously delineated boundary of methane detections and has not historically indicated the presence of methane, an evaluation should be conducted addressing the potential presence of combustible gas outside the monitored area and a work plan prepared to delineate the potential extent of methane as appropriate.

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BFI Waste Systems of North America, LLC
Mallard Lake Landfill, Hanover Park, IL

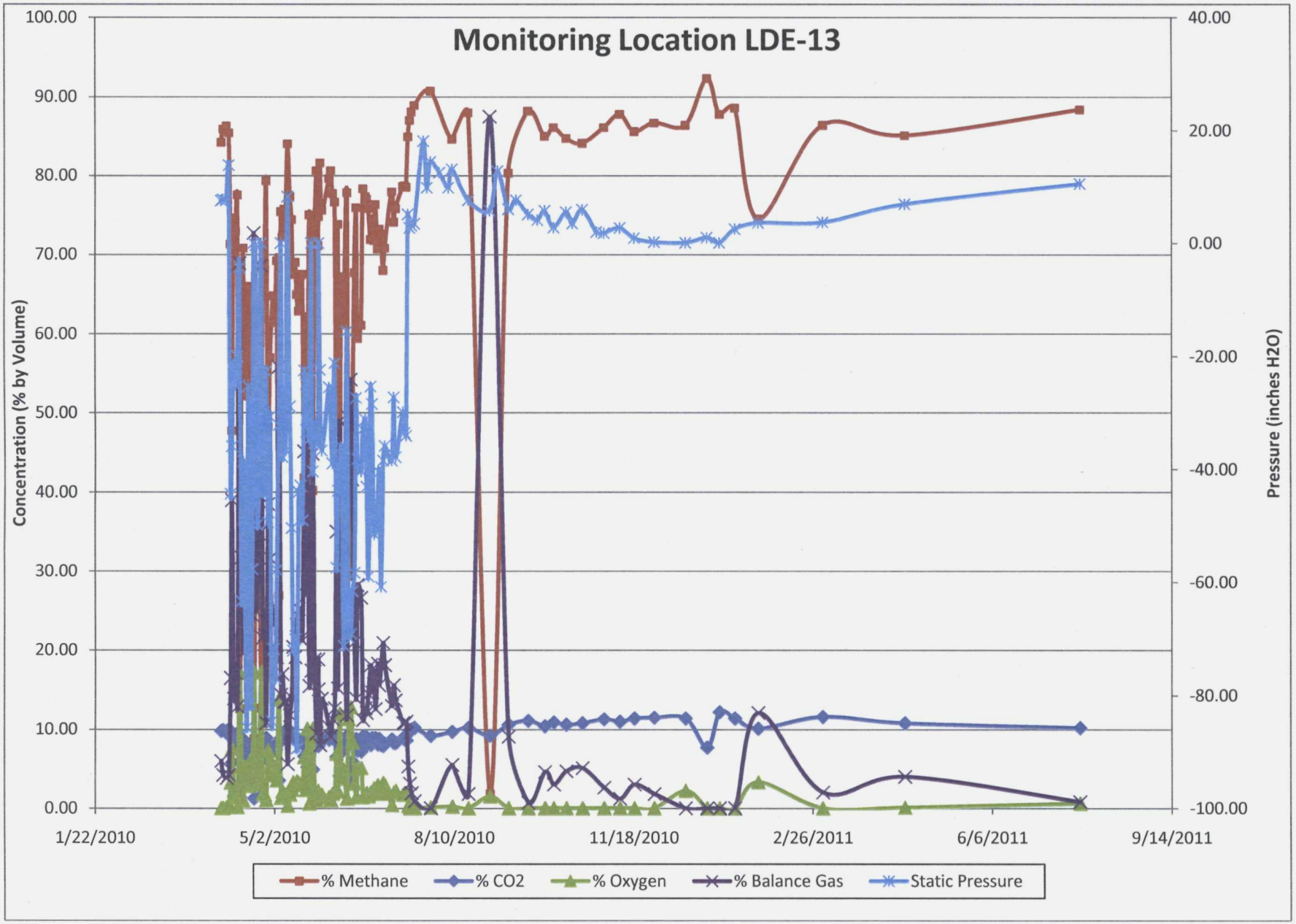
Figure 2

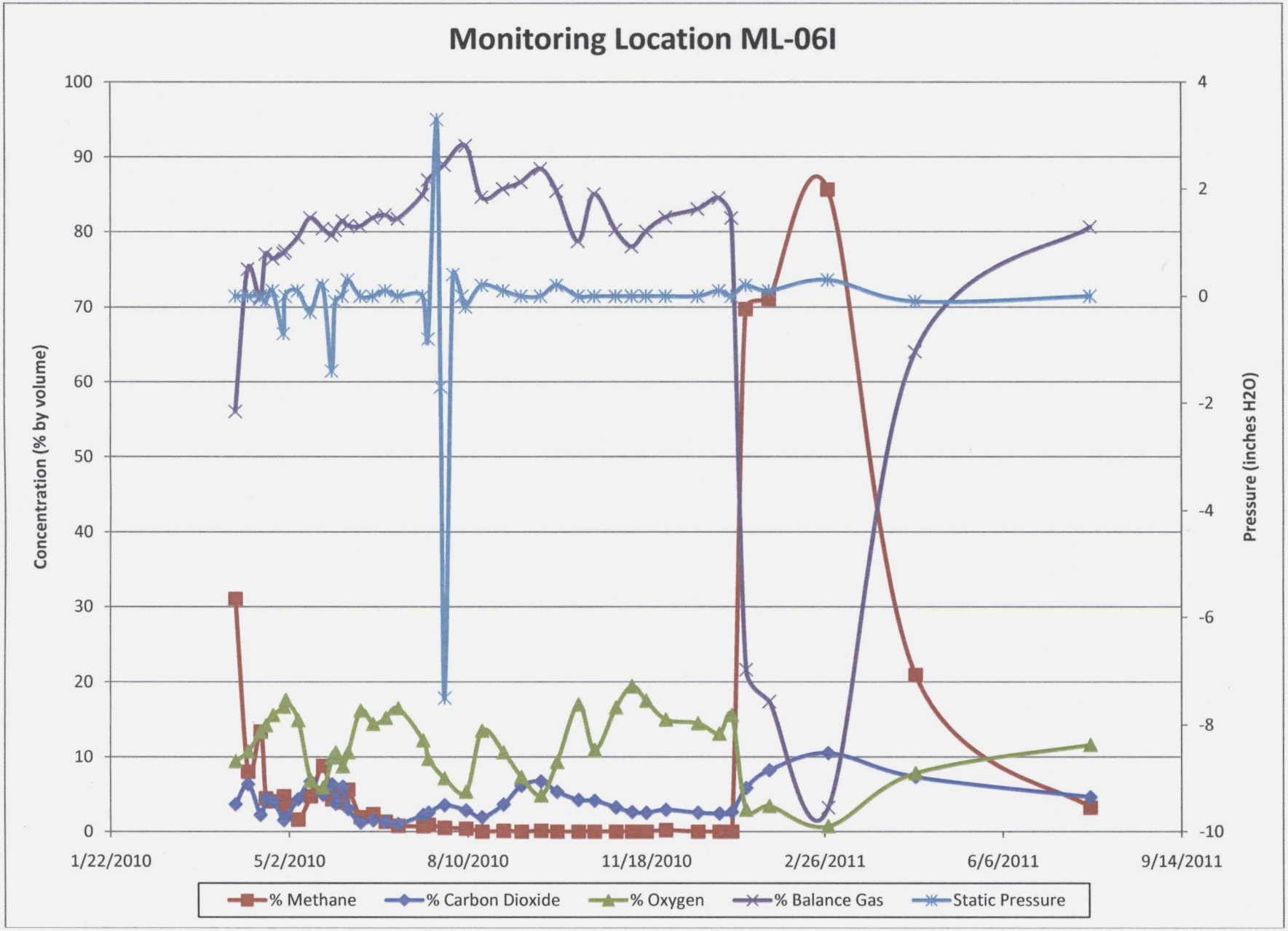
Triggers for Additional Remedial Action
Northeast Investigation Area

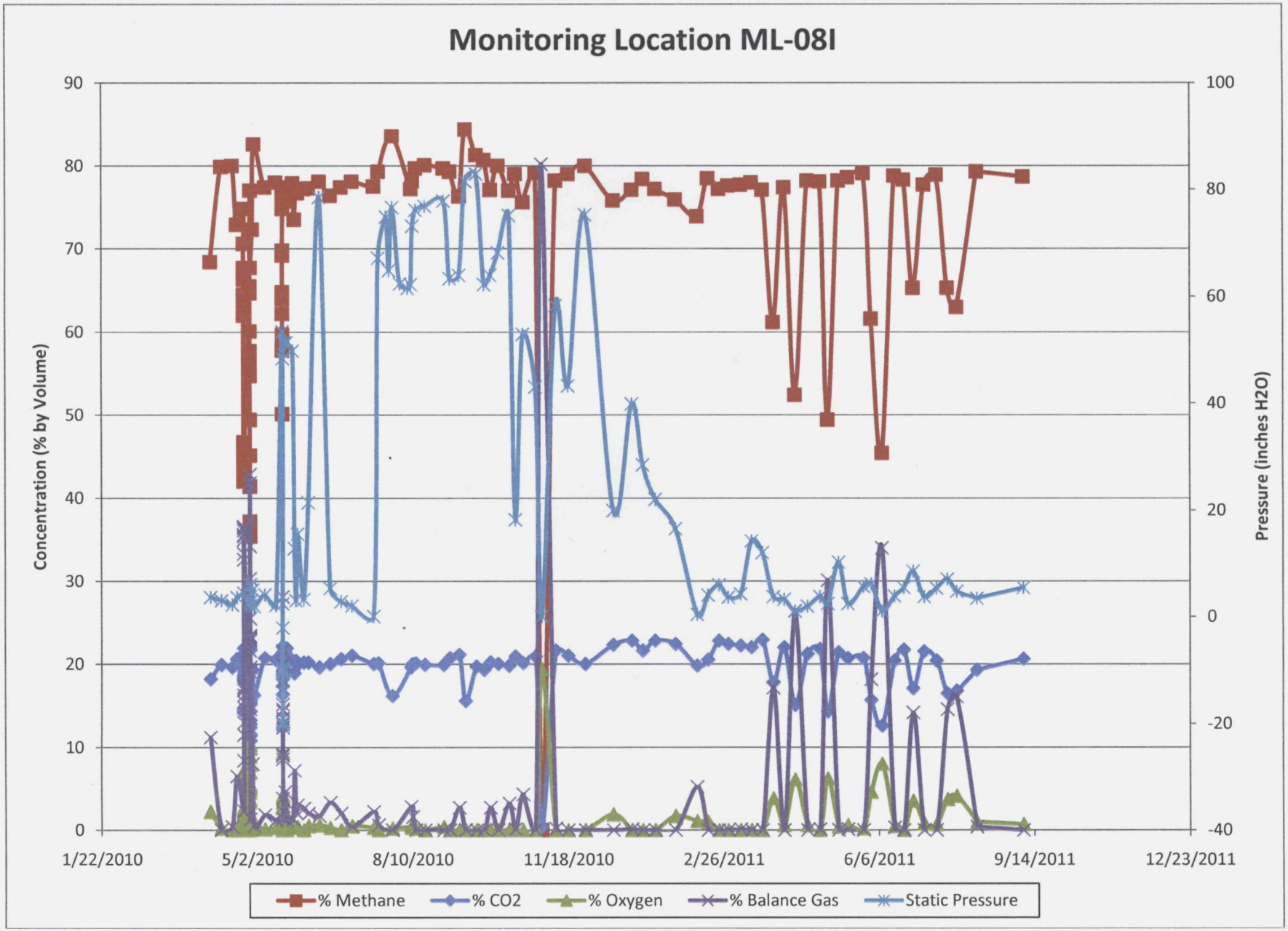
APPENDIX

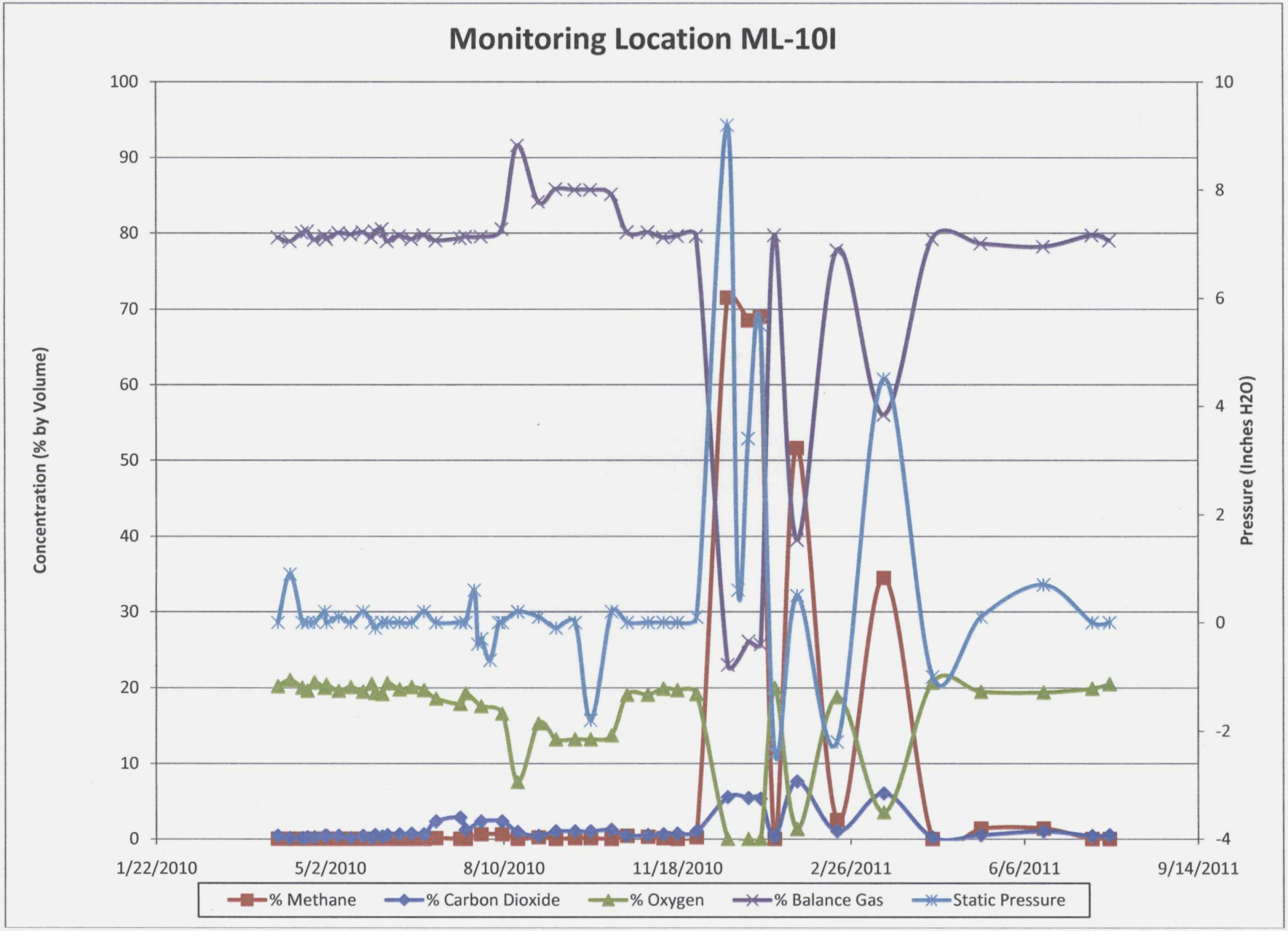
Appendix A

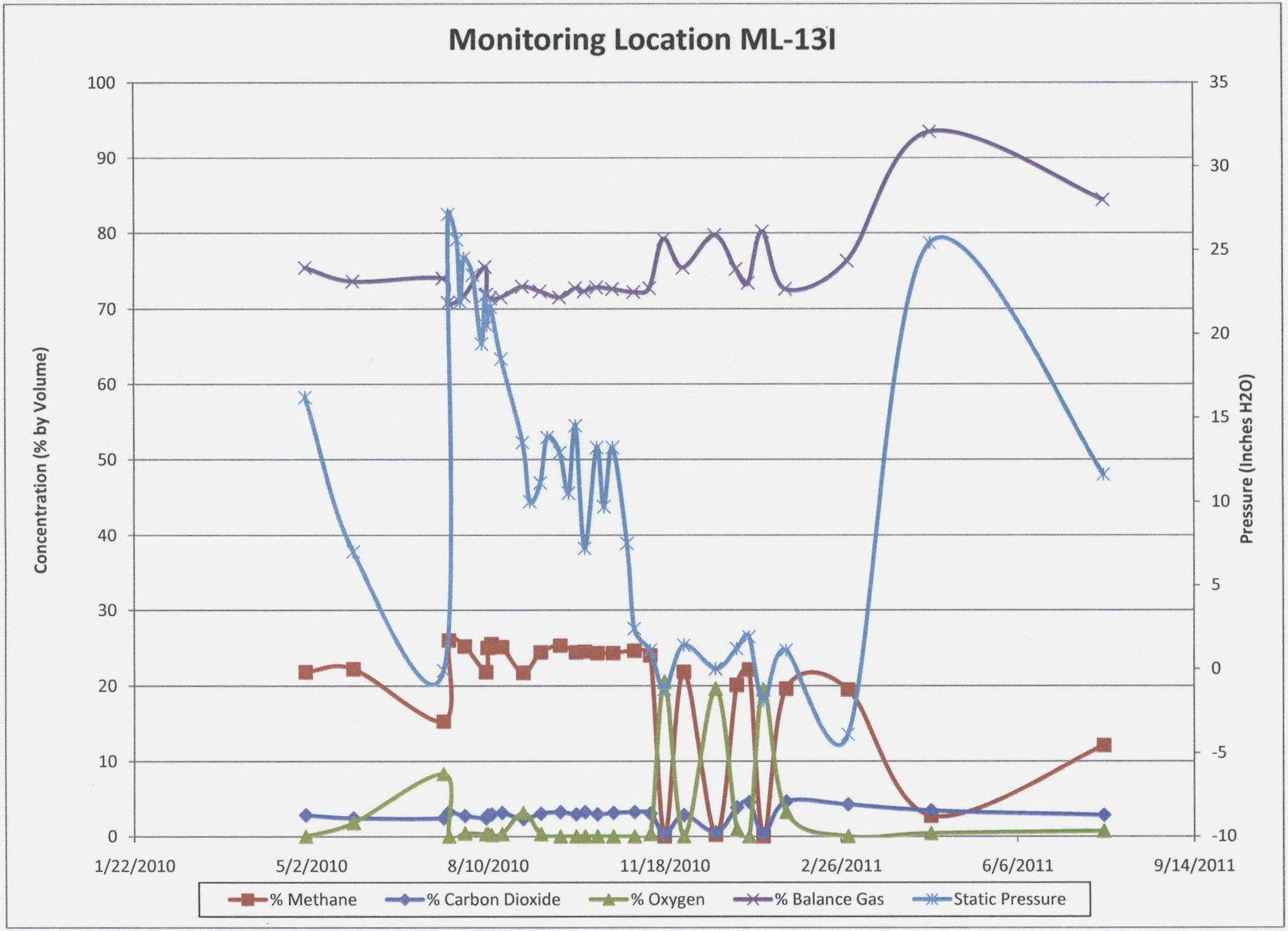
Methane and Pressure Graphs

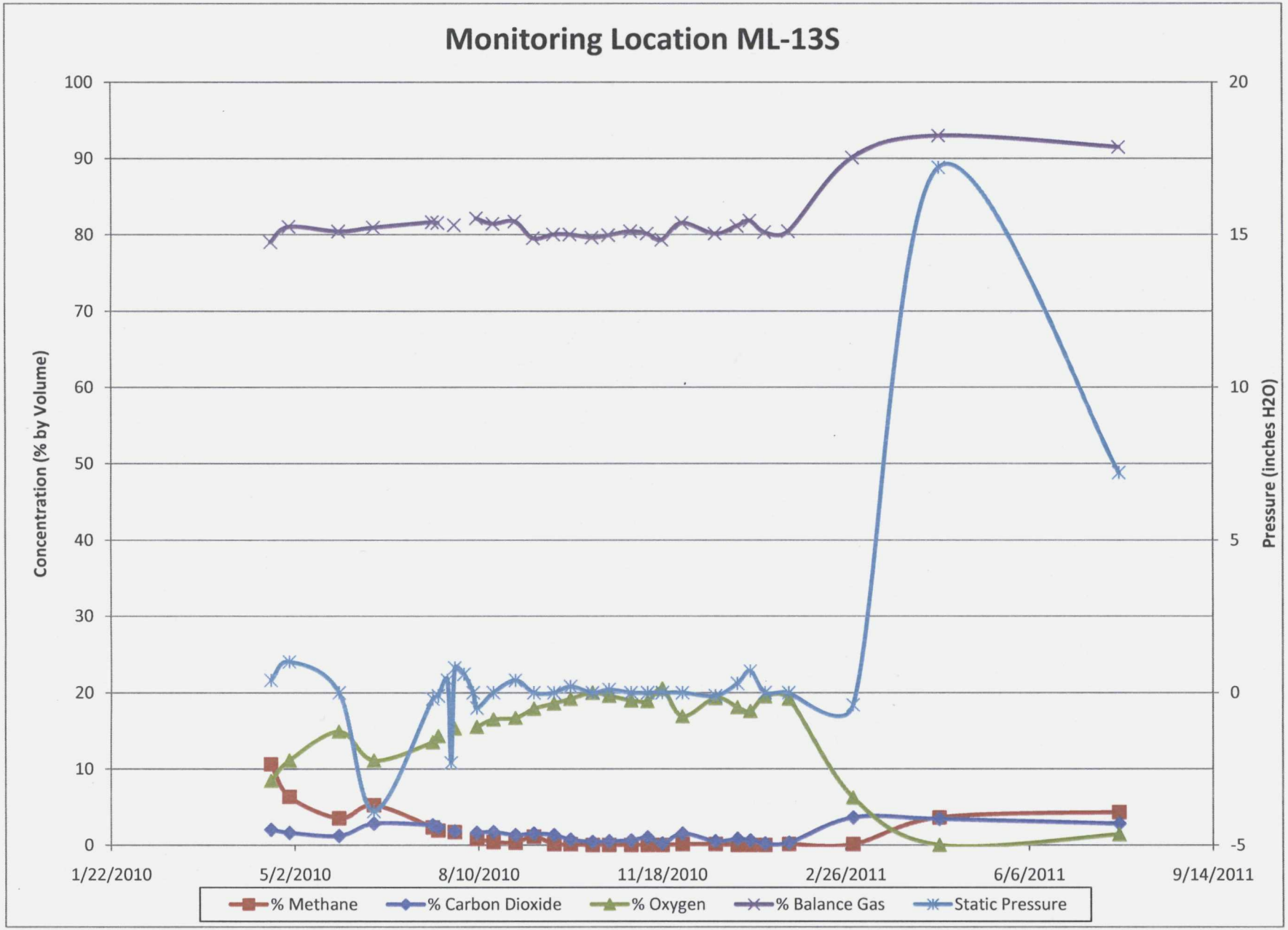

Monitoring Location LDE-13
Concentration (% by Volume)
Pressure (inches H2O)
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
40.00
20.00
0.00
-20.00
-40.00
-60.00
-80.00
-100.00
1/22/2010
5/2/2010
8/10/2010
11/18/2010
2/26/2011
6/6/2011
9/14/2011
% Methane
% CO2
% Oxygen
% Balance Gas
Static Pressure

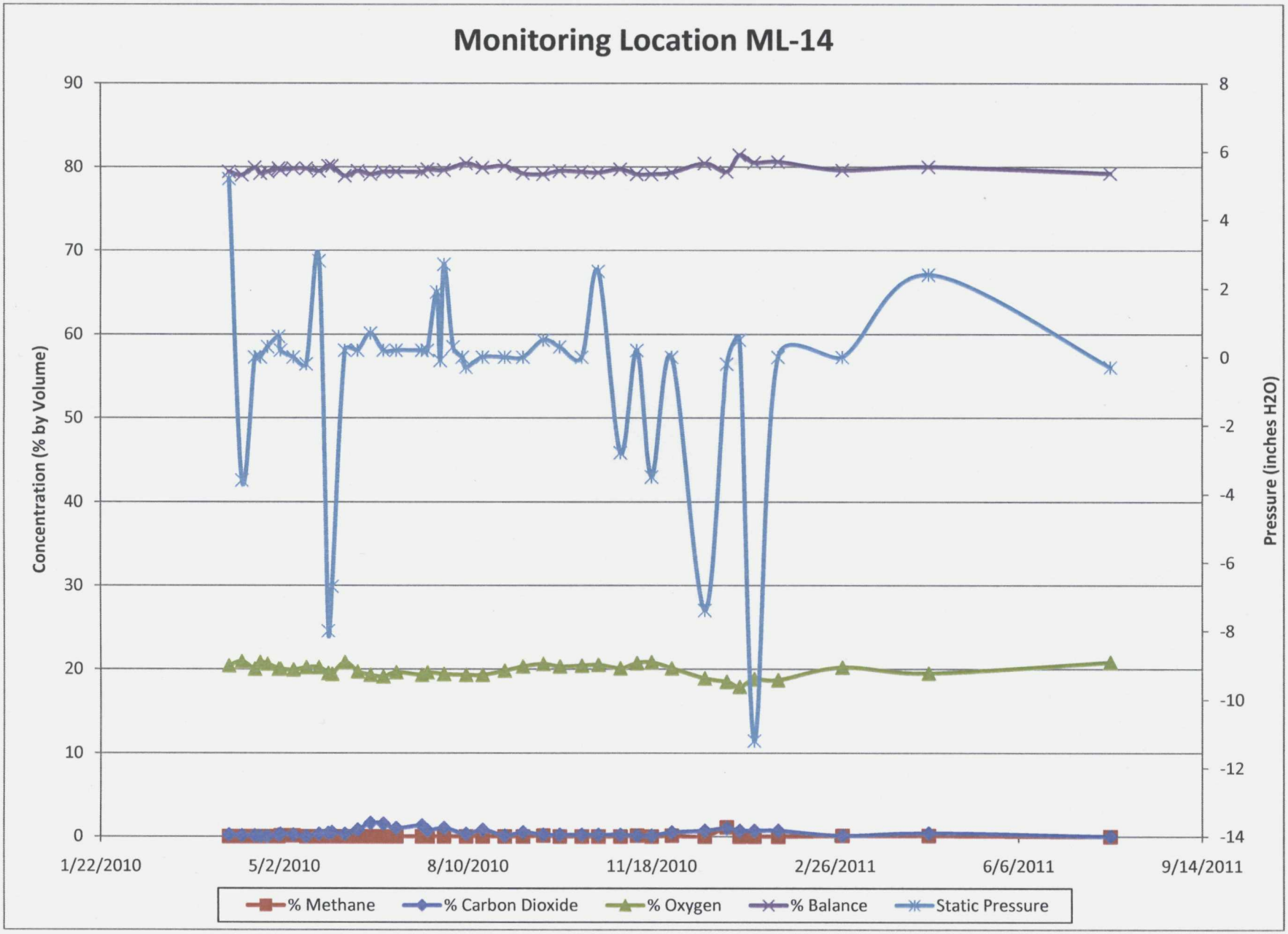

Monitoring Location ML-06I
Concentration (% by volume)
Pressure (inches H2O)
100
90
80
70
60
50
40
30
20
10
0
4
2
0
-2
-4
-6
-8
-10
1/22/2010
5/2/2010
8/10/2010
11/18/2010
2/26/2011
6/6/2011
9/14/2011
% Methane
% Carbon Dioxide
% Oxygen
% Balance Gas
Static Pressure

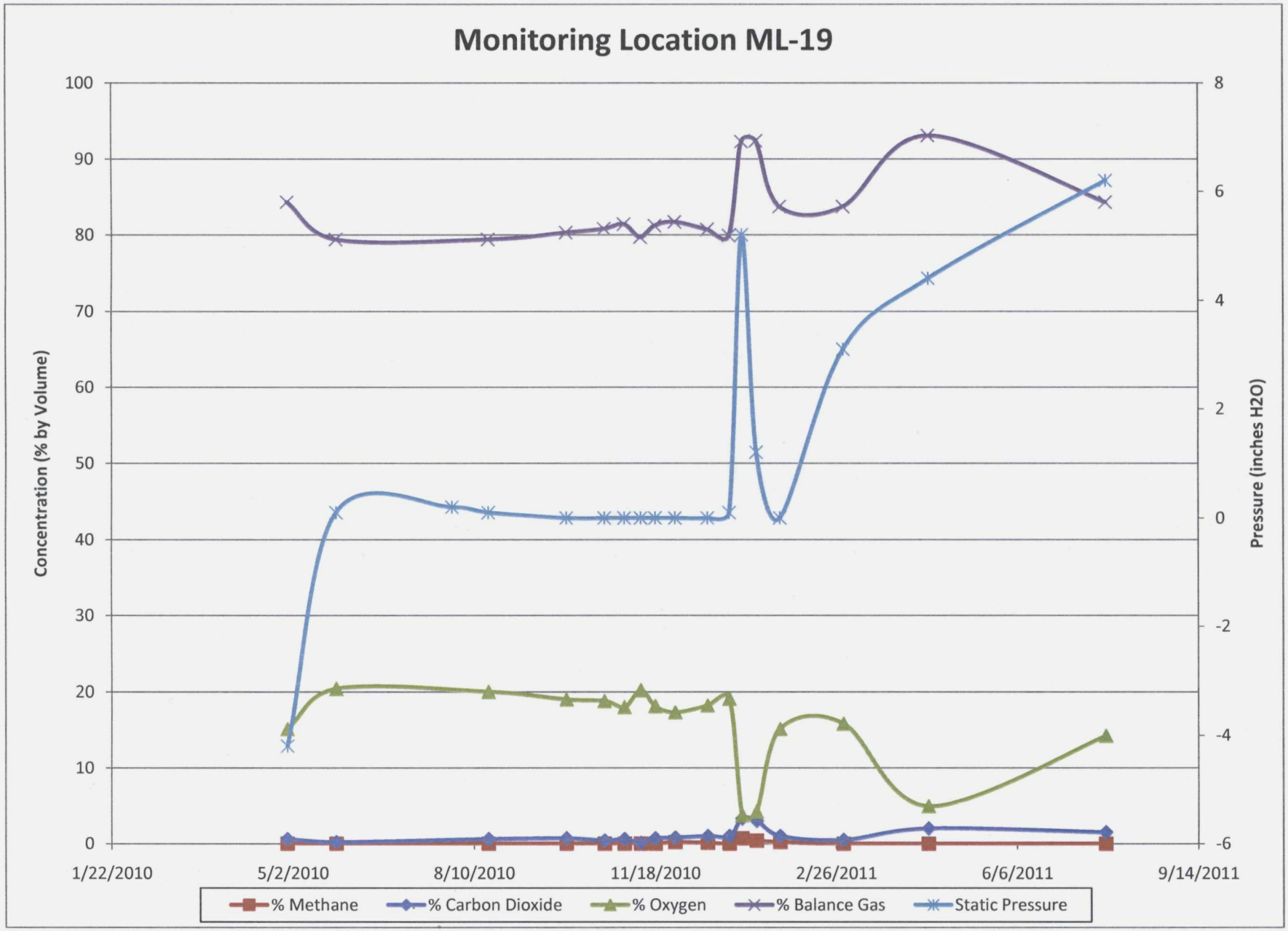

Monitoring Location ML-08I
Concentration (% by Volume)
Pressure (inches H2O)
90
80
70
60
50
40
30
20
10
0
100
80
60
40
20
0
-20
-40
1/22/2010
5/2/2010
8/10/2010
11/18/2010
2/26/2011
6/6/2011
9/14/2011
12/23/2011
% Methane
% CO2
% Oxygen
% Balance Gas
Static Pressure

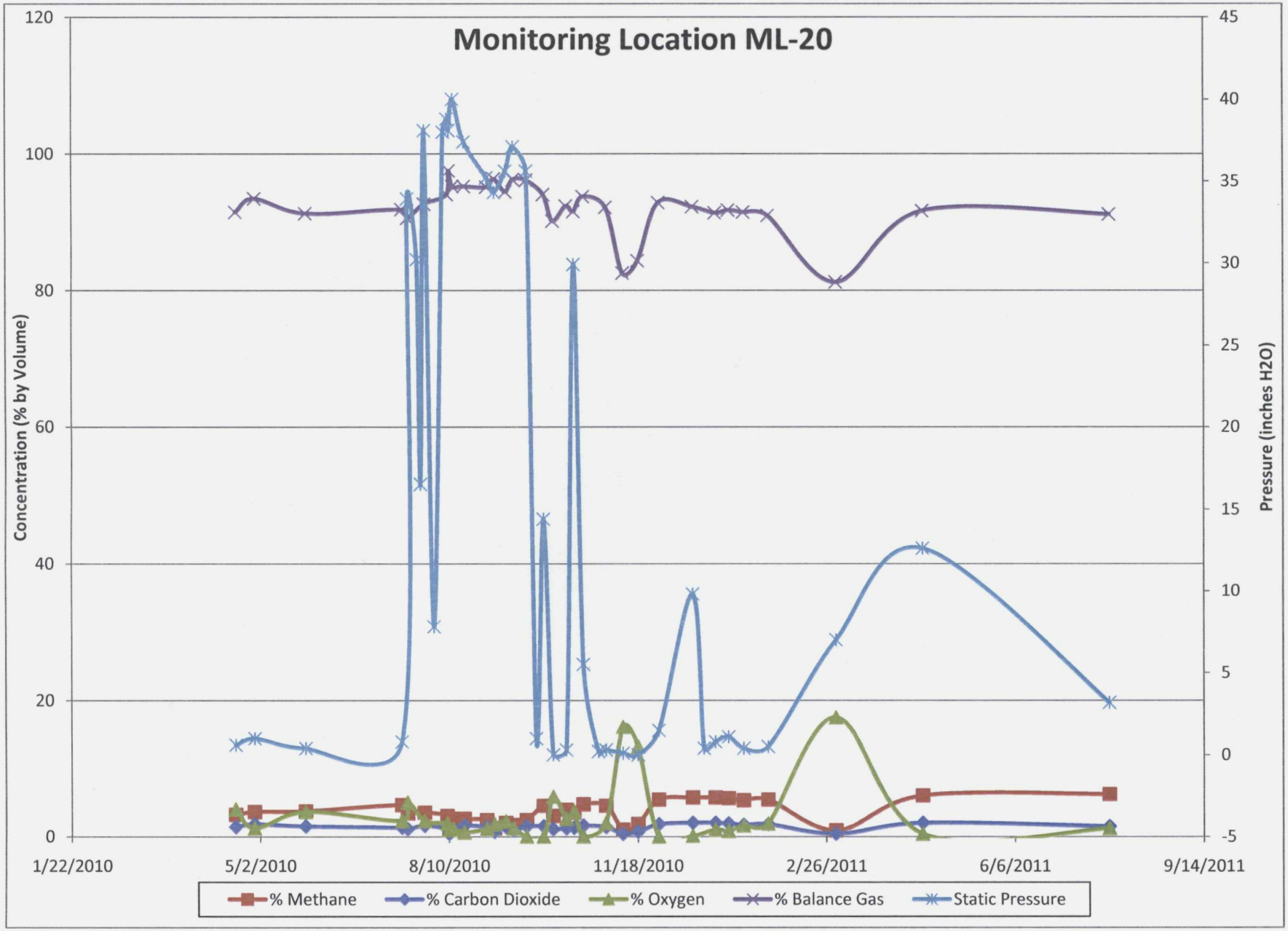

Monitoring Location ML-10I
Concentration (% by Volume)
Pressure (Inches H2O)
100
90
80
70
60
50
40
30
20
10
0
10
8
6
4
2
0
-2
-4
1/22/2010
5/2/2010
8/10/2010
11/18/2010
2/26/2011
6/6/2011
9/14/2011
% Methane
% Carbon Dioxide
% Oxygen
% Balance Gas
Static Pressure

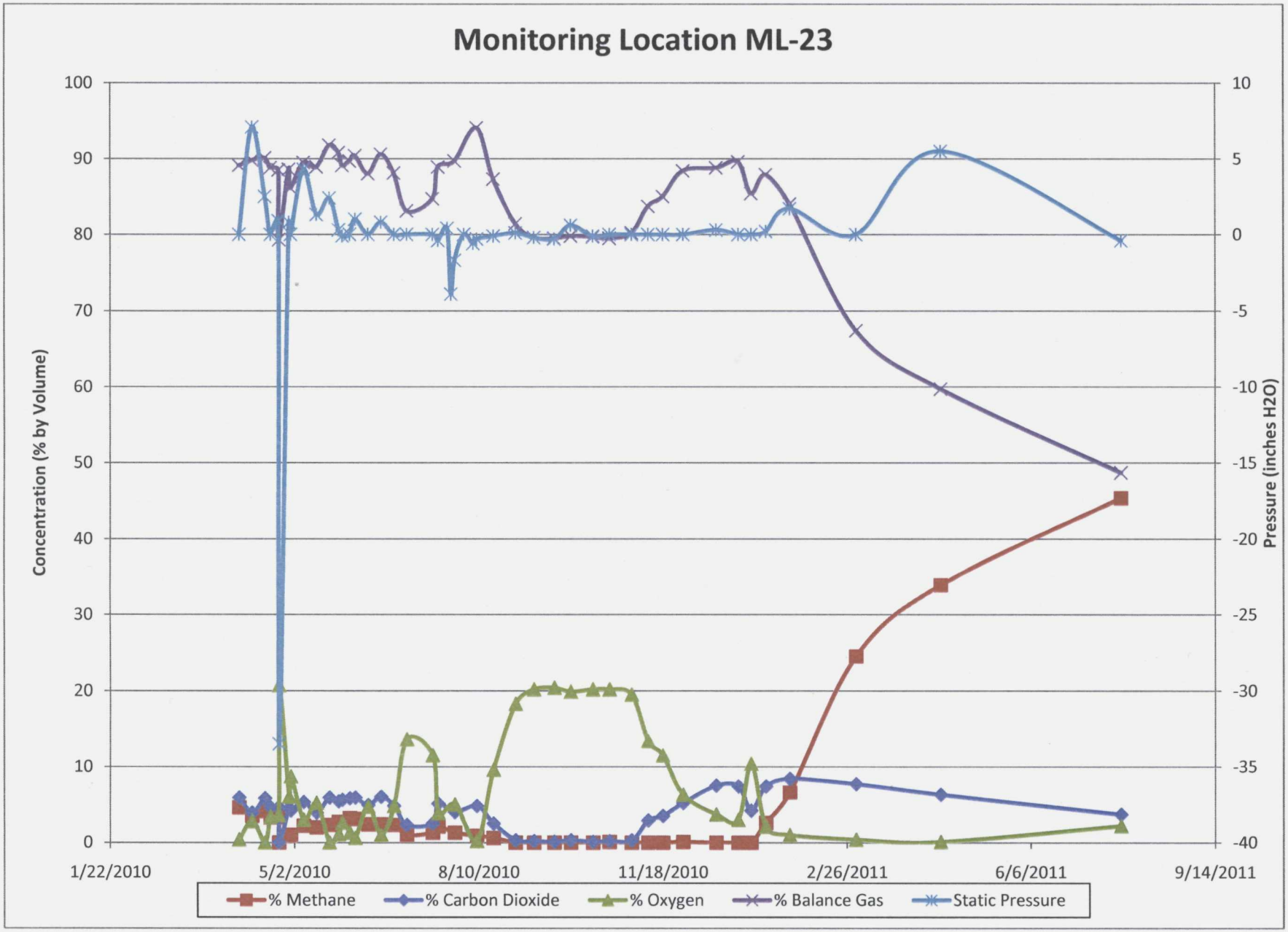

Monitoring Location ML-13I
Concentration (% by Volume)
Pressure (Inches H2O)
100
90
80
70
60
50
40
30
20
10
0
35
30
25
20
15
10
5
0
-5
-10
1/22/2010
5/2/2010
8/10/2010
11/18/2010
2/26/2011
6/6/2011
9/14/2011
% Methane
% Carbon Dioxide
% Oxygen
% Balance Gas
Static Pressure

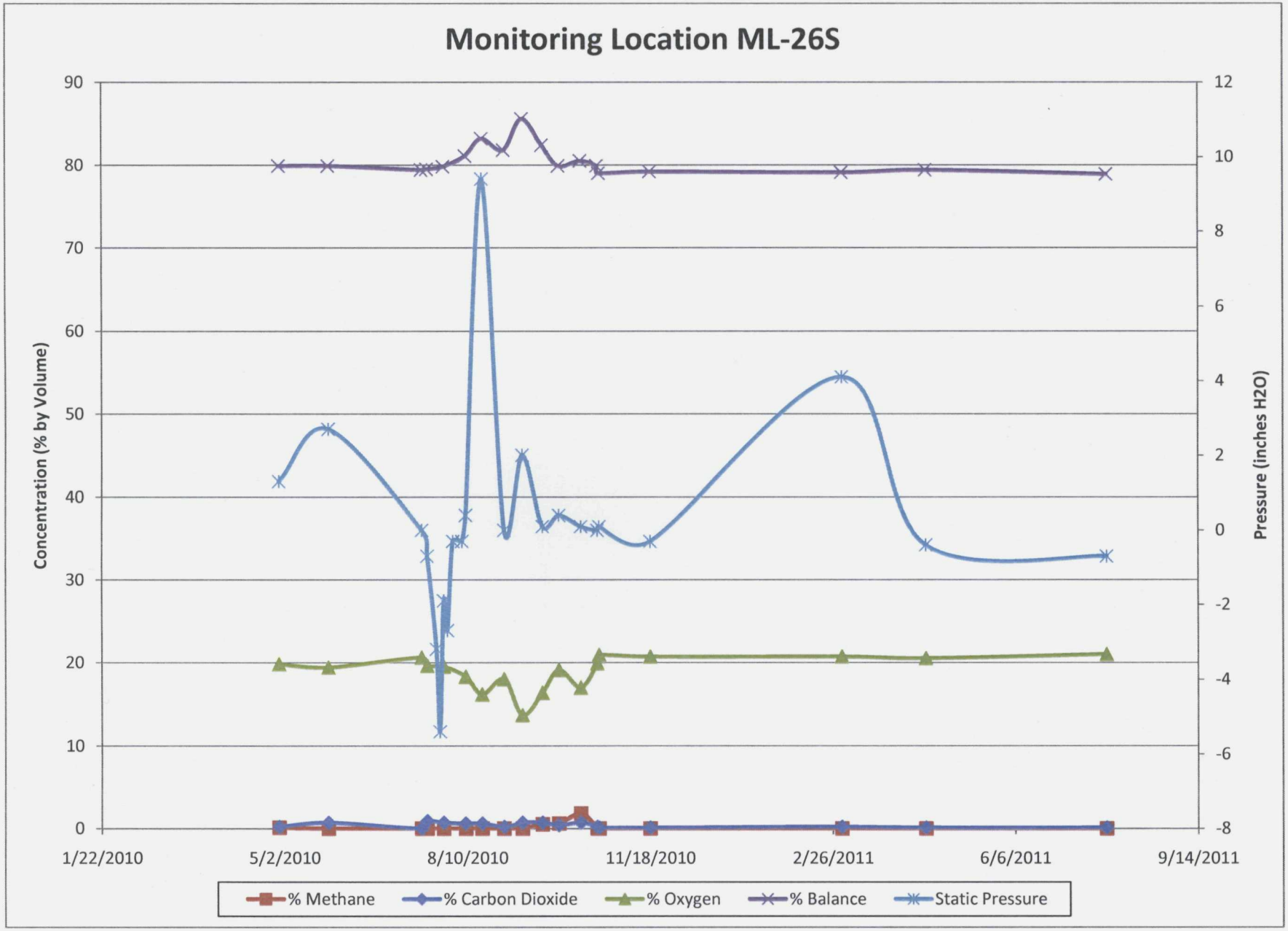

Monitoring Location ML-13S
Concentration (% by Volume)
Pressure (inches H2O)
100
90
80
70
60
50
40
30
20
10
0
20
15
10
5
0
-5
1/22/2010
5/2/2010
8/10/2010
11/18/2010
2/26/2011
6/6/2011
9/14/2011
% Methane
% Carbon Dioxide
% Oxygen
% Balance Gas
Static Pressure

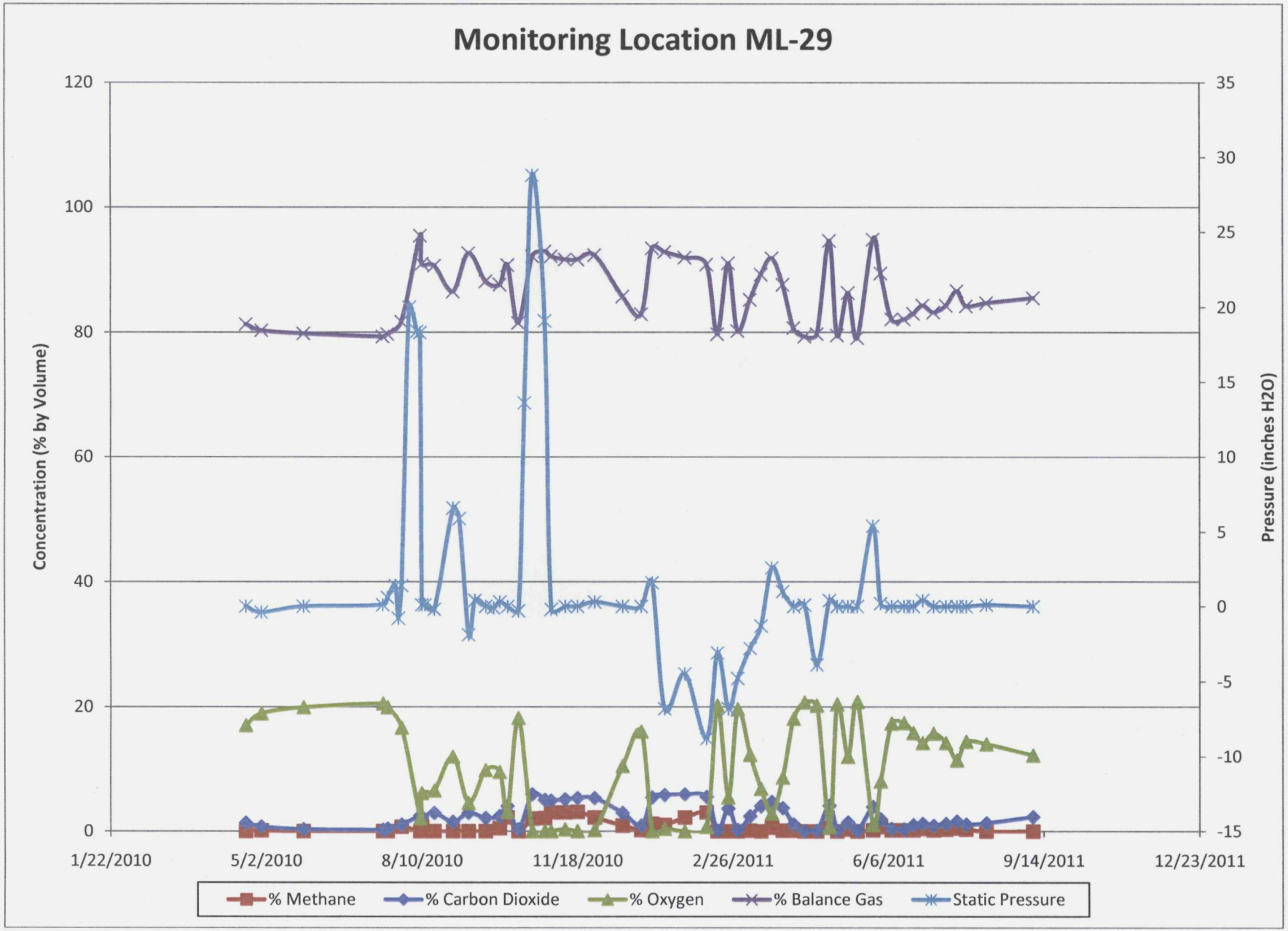

Monitoring Location ML-14
Concentration (% by Volume)
Pressure (inches H2O)
90
80
70
60
50
40
30
20
10
0
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
1/22/2010
5/2/2010
8/10/2010
11/18/2010
2/26/2011
6/6/2011
9/14/2011
% Methane
% Carbon Dioxide
% Oxygen
% Balance
Static Pressure

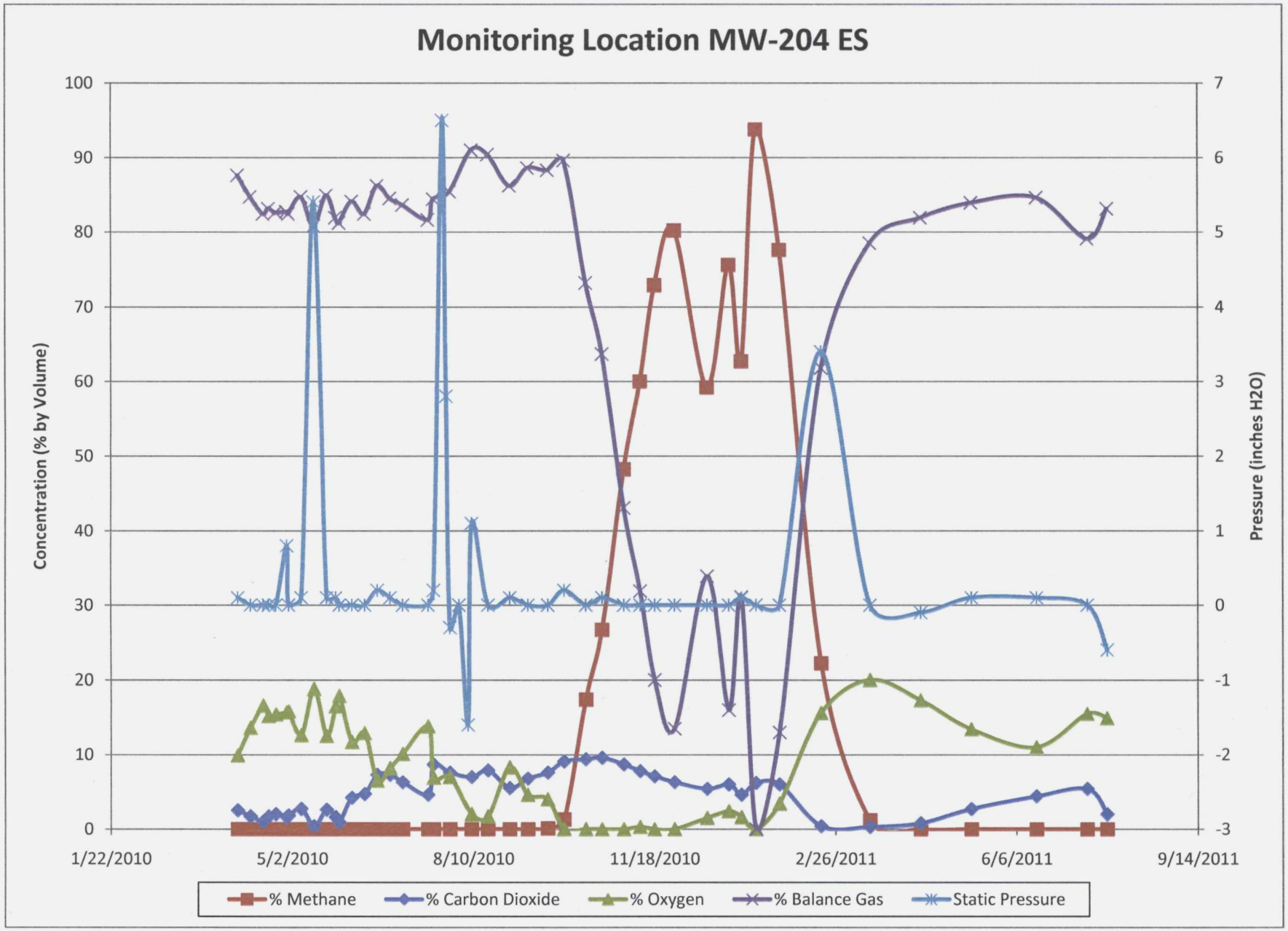

Monitoring Location ML-19
Concentration (% by Volume)
Pressure (inches H2O)
100
90
80
70
60
50
40
30
20
10
0
8
6
4
2
0
-2
-4
-6
1/22/2010
5/2/2010
8/10/2010
11/18/2010
2/26/2011
6/6/2011
9/14/2011
% Methane
% Carbon Dioxide
% Oxygen
% Balance Gas
Static Pressure


Monitoring Location ML-20
Concentration (% by Volume)
Pressure (inches H2O)
120
100
80
60
40
20
0
45
40
35
30
25
20
15
10
5
0
-5
1/22/2010
5/2/2010
8/10/2010
11/18/2010
2/26/2011
6/6/2011
9/14/2011
% Methane
% Carbon Dioxide
% Oxygen
% Balance Gas
Static Pressure


Monitoring Location ML-23
Concentration (% by Volume)
Pressure (inches H2O)
100
90
80
70
60
50
40
30
20
10
0
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
1/22/2010
5/2/2010
8/10/2010
11/18/2010
2/26/2011
6/6/2011
9/14/2011
% Methane
% Carbon Dioxide
% Oxygen
% Balance Gas
Static Pressure


Monitoring Location ML-26S
Concentration (% by Volume)
Pressure (inches H2O)
90
80
70
60
50
40
30
20
10
0
12
10
8
6
4
2
0
-2
-4
-6
-8
1/22/2010
5/2/2010
8/10/2010
11/18/2010
2/26/2011
6/6/2011
9/14/2011
% Methane
% Carbon Dioxide
% Oxygen
% Balance
Static Pressure


Monitoring Location ML-29
Concentration (% by Volume)
Pressure (inches H2O)
120
100
80
60
40
20
0
35
30
25
20
15
10
5
0
-5
-10
-15
1/22/2010
5/2/2010
8/10/2010
11/18/2010
2/26/2011
6/6/2011
9/14/2011
12/23/2011
% Methane
% Carbon Dioxide
% Oxygen
% Balance Gas
Static Pressure


Monitoring Location MW-204 ES
Concentration (% by Volume)
Pressure (inches H2O)
100
90
80
70
60
50
40
30
20
10
0
7
6
5
4
3
2
1
0
-1
-2
-3
1/22/2010
5/2/2010
8/10/2010
11/18/2010
2/26/2011
6/6/2011
9/14/2011
% Methane
% Carbon Dioxide
% Oxygen
% Balance Gas
Static Pressure

Appendix B

Probe and Well Monitoring Data
(Provided on enclosed CD)